

LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA6 | South Ruislip to Ickenham
Baseline (SV-002-006)
Sound, noise and vibration

November 2013

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Department
for Transport

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1 Introduction

1.1 Structure of the sound, noise and vibration appendices

- 1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (Volume 5: Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas (CFA).
- 1.1.2 For the South Ruislip to Ickenham area, the other three sections are as follows:
- baseline sound, noise and vibration (Volume 5: Appendix SV-002-006) (this appendix);
 - construction sound, noise and vibration (Volume 5: Appendix SV-003-006); and
 - operational sound, noise and vibration (Volume 5: Appendix SV-004-006).
- 1.1.3 Maps referred to within this appendix are contained in the Volume 5, Sound, Noise and Vibration Map Book.
- 1.1.4 This appendix includes details of the existing and future baseline sound environment within the area. It provides details of measurements and any other data collection which has been undertaken in order to obtain existing and future baseline sound levels.

1.2 Existing acoustic environment

- 1.2.1 A large proportion of the Proposed Scheme in this area is in tunnel. Consequently, the description of the existing sound environment concentrates on the areas around the South Ruislip vent shaft, West Ruislip portal and locations adjacent to the surface sections of the line.
- 1.2.2 The baseline sound environment around the vent shaft site at South Ruislip is typical for an urban situation, with existing sound levels determined by passenger and freight services on the nearby Chiltern Main Line, the London Underground Central Line (which is above ground here) and local road traffic movements. Aircraft movements associated with nearby Royal Air Force (RAF) Northolt can also be heard.
- 1.2.3 To the west of the study area, road traffic from Harvil Road, Breakspear Road South and the B466 Ickenham Road and railway traffic from the Chiltern Main Line and London Underground Central Line are the principal sound sources giving rise to daytime sound levels of typically around 65dB¹.
- 1.2.4 In Ickenham, to the south of the Central Line, the area is mainly residential. Close to the B466 Ickenham Road and Breakspear Road, traffic on these roads dominates the soundscape and daytime sound levels are typically around 60dB. Close to the Central Line, the sound of trains adds to that of road traffic that has been screened by

¹ Quoted dB values at residential areas refer to the free-field 16 hour daytime (07:00 to 23:00) equivalent continuous sound pressure level, $L_{pAeq,16hr}$.

interstitial buildings, resulting in similar daytime sound levels of around 60dB. Further into the residential area, lower levels of sound are audible from the distant busier roads. This is added to by sounds from traffic on local roads (Hoylake Crescent and The Greenway, for example). Intermittent sound from aircraft is audible in most of these locations and daytime sound levels are typically 50 to 55dB.

- 1.2.5 In West Ruislip, to the north of the Central Line, road traffic is the dominant sound at the majority of locations. Close to the B466 Ickenham Road daytime sound levels are typically around 75dB. Further away from this busy road in the residential area around Hill Lane, Glenhurst Avenue and Woodville Gardens, the constant sound of distant road traffic adds to intermittent local road traffic and occasional contributions of birds, high-altitude aircraft, distant trains and community activities, resulting in typical daytime sound levels of around 55dB.
- 1.2.6 There are some relatively isolated properties along Harvil Road and traffic on this route is the dominant sound source at these properties. Properties closer to the road experience higher sound levels (typically around 75dB), than properties set further back from the road (55 to 60dB).
- 1.2.7 The sound from large vehicles travelling to and from the waste transfer station at Newyears Green are noticeable at properties on Newyears Green Lane, adding to the sound of distant road traffic. Typical sound levels in this location are 55 to 60dB.
- 1.2.8 At night, the same sound sources generally contribute and in residential areas away from the major roads sound levels are approximately 5 to 10 dB² lower than daytime. The equivalent reduction for the more remote residential areas (further from the main roads) is approximately 10 to 15dB.

² Night-time sound levels refer to the free-field 8 hour night-time (23:00 to 07:00) equivalent continuous sound pressure level, $L_{pAeq,8hr}$.

2 Scope, assumptions and limitations

2.1 Sound and vibration sensitive receptors

2.1.1 Within the South Ruislip to Ickenham area, 96 assessment locations have been defined to represent all identified sound and vibration sensitive receptors within the spatial scope. The assessment locations are shown on the detailed Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book). Within this area, the following types of sound and vibration sensitive receptors have been identified:

- residential areas;
- education facilities;
- community centres and meeting facilities;
- places of worship; and
- healthcare facilities.

2.2 Local engagement

2.2.1 It has not been possible to hold discussions with representatives of London Borough of Hillingdon regarding the approach which has been taken to baseline monitoring within this area, the identification of sound and vibration sensitive receptors, the selection of assessment location and baseline sound levels at these assessment locations.

2.2.2 Consequently, the Local Authority has not influenced the assessment locations used and the monitoring undertaken and reported in this document.

2.2.3 Local engagement through community forum meetings has provided the opportunity for local groups to suggest appropriate baseline sound monitoring locations. Any suggestions received from these groups have been considered and influenced the monitoring undertaken and reported in this document.

2.3 Existing baseline sound monitoring locations

2.3.1 Maps showing the baseline sound monitoring locations and assessment locations within this area are included in Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book).

3 Environmental baseline

3.1 Existing baseline data collection methodology

- 3.1.1 The overall approach to baseline data collection for sound noise and vibration is described in Volume 5: Appendix SV-001-000.
- 3.1.2 Over the South Ruislip to Ickenham area, a large number of baseline sound measurements have been undertaken. These have been classified as follows:
- long-term measurements – unattended measurements of several days duration;
 - medium-term measurements – attended measurements of several hours duration (generally repeated at different times of day); and,
 - short-term measurements – attended measurements typically of 30 minutes duration (generally repeated at different times of day).
- 3.1.3 In this CFA a total of 36 baseline sound level measurements have been undertaken.
- 3.1.4 In the southern section of this area the route of the Proposed Scheme is in a tunnel and therefore only one short term measurement has been completed in the vicinity of the South Ruislip ventilation and intervention (vent shaft) shaft.
- 3.1.5 Baseline sound levels in the area around the West Ruislip tunnel portal have been established by undertaking four long-term measurements and seven short-term measurements at various locations in the nearby residential areas.
- 3.1.6 Further to the west, ten long-term measurements were undertaken at properties in West Ruislip and at locations on Harvil Road. A further six short-term measurements were undertaken to supplement these long-term measurements.
- 3.1.7 At properties in the more rural parts to the northwest of the area, seven long-term measurements were undertaken at various locations in the vicinity of Breakspear Road South, Newyears Green Lane and Harvil Road. A short-term measurement was also undertaken on Clovers Grove on the western fringes of Ruislip.

3.2 Existing baseline sound levels

- 3.2.1 From the measurements described in Section 3.1, baseline sound levels have been ascertained for each assessment location within this area. These levels are presented in terms of the following key sound indicators:
- For the operational sound assessment
 - $L_{pAeq,16hr}$ weekday daytime (07:00-23:00) sound pressure level;
 - $L_{pAeq,8hr}$ weekday night-time (23:00-07:00) sound pressure level;
 - arithmetic average of $L_{pAFmax,5min}$ night-time sound pressure level; and

- highest $L_{pAFmax,5min}$ night-time sound pressure level.
- For the construction sound assessment
 - daytime L_{pAeq} sound pressure level (Monday to Friday 07:00-19:00; Saturday 07:00-13:00);
 - evening/weekend L_{pAeq} sound pressure level (Monday to Friday 19:00-23:00; Saturday 13:00- 23:00; Sunday 07:00 to 23:00); and
 - night-time L_{pAeq} sound pressure level (Monday to Sunday 23:00-07:00).

3.2.2 These values are presented in Table 1. The data source coding included within this table details how the baseline sound levels allocated to each assessment location have been derived. This coding is summarised in Table 2 and explained in detail in Volume 5: Appendix SV-001-000.

Appendix SV-002-006

Table 1: Existing baseline sound levels

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
401424	Harvil Road, Harefield	LM0076	54.5	50.4	57.7	76.7	54.7	50.7	50.2	1,A,ii,b
402608	Harvil Road, Harefield	LM5100	72.1	68.0	81.1	100.1	73.1	69.1	68.6	3,A,ii,b
405821	St. Georges Drive, Ickenham	LM2036	45.8	41.4	48.8	69.2	46.2	47.3	41.5	1,A,iii,b
405890	Breakspear Road South, Ickenham	LM1069	57.6	50.4	62.4	70.3	58.1	56.2	50.1	1,A,iii,b
408586	New Years Green Lane, Harefield	LM1101	49.8	44.9	49.3	70.3	50.3	47.2	45.1	1,A,i,a
408671	New Years Green Lane, Harefield	LM1101	49.8	44.9	49.3	70.3	50.3	47.2	45.1	1,A,ii,b
408811	Harvil Road, Ickenham	CS1100	60.5	52.8	62.6	73.8	60.7	58.6	52.8	1,A,i,a
410569	The Greenway, Ickenham	LM0077	58.6	52.9	56.5	84.7	58.5	56.8	52.4	1,A,ii,b
410650	The Greenway, Ickenham	LM0015	48.2	45.0	53.0	65.8	48.6	48.4	45.3	3,A,ii,b
410706	Oak Avenue, Ickenham	LM7010	60.2	55.3	60.0	83.6	60.8	59.4	55.3	3,A,ii,b
410739	Oak Avenue, Ickenham	LM7010	60.2	55.3	60.0	83.6	60.8	59.4	55.3	3,A,ii,b
410896	Parkfield Road, Ickenham	LM7010	60.2	55.3	60.0	83.6	60.8	59.4	55.3	3,A,ii,b
410980	Parkfield Road, Ickenham	LM7010	60.2	55.3	60.0	83.6	60.8	59.4	55.3	3,A,ii,b
411779	Rectory Way, Ickenham	LM7010	60.2	55.3	60.0	83.6	60.8	59.4	55.3	3,A,ii,b
411869	Charlton Close, Ickenham	LM5011	55.6	51.2	63.7	84.0	56.0	57.1	51.3	2,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
412015	Hoylake Crescent, Ickenham	LM2018	49.1	44.2	46.5	70.1	49.7	48.3	44.2	1,A,i,a
412058	Hoylake Crescent, Ickenham	LM2018	49.1	44.2	46.5	70.1	49.7	48.3	44.2	1,A,ii,b
412180	Hoylake Crescent, Ickenham	LM0016	49.1	46.8	56.8	80.4	49.7	48.2	47.0	3,A,ii,b
412363	Bushey Road, Ickenham	LM5011	55.6	51.2	63.7	84.0	56.0	57.1	51.3	2,A,iii,b
412918	Bushey Road, Ickenham	LM5011	55.6	51.2	63.7	84.0	56.0	57.1	51.3	2,A,iii,b
413031	Hoylake Crescent, Ickenham	LM0016	49.1	46.8	56.8	80.4	49.7	48.2	47.0	3,A,ii,b
413114	Pynchester Close, Ickenham	LM2032	46.5	38.9	43.5	59.1	46.9	44.0	37.6	1,A,ii,b
413146	Bushey Road, Ickenham	LM0016	49.1	46.8	56.8	80.4	49.7	48.2	47.0	3,A,ii,b
413332	Copthall Road East, Ickenham	LM5011	55.6	51.2	63.7	84.0	56.0	57.1	51.3	2,A,i,a
413480	Hoylake Crescent, Ickenham	LM0037	52.0	45.2	51.7	72.4	51.9	49.9	45.2	1,A,ii,b
413536	Hoylake Crescent, Ickenham	LM0037	52.0	45.2	51.7	72.4	51.9	50.3	45.2	1,A,i,a
413556	Copthall Road West, Ickenham	LM1069	57.6	50.4	62.4	70.3	58.1	56.2	50.1	1,A,i,a
413594	Copthall Road West, Ickenham	LM2036	45.8	41.4	48.8	69.2	46.2	47.3	41.5	1,A,iii,b
413856	Elgar Close, Ickenham	LM2036	45.8	41.4	48.8	69.2	46.2	47.3	41.5	1,A,iii,b
414117	St. Georges Drive, Ickenham	LM2036	45.8	41.4	48.8	69.2	46.2	47.3	41.5	1,A,iii,b
414183	Breakspear Road South, Ickenham	LM1069	57.6	50.4	62.4	70.3	58.1	56.2	50.1	1,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
415660	Rectory Way, Ickenham	LM5011	55.6	51.2	63.7	84.0	56.0	57.1	51.3	2,A,iii,b
416858	Kenbury Close, Ickenham	LM5010	49.5	45.1	52.5	72.9	49.9	51.0	45.2	3,A,iii,b
417742	Swakeleys Road, Ickenham	LM2032	46.5	38.9	43.5	59.1	46.9	44.0	37.6	1,A,iii,b
418434	Breakspear Road South, Harefield	LM1046	57.1	49.0	60.8	69.0	57.5	55.4	48.6	1,A,ii,b
418507	Tile Kiln Lane, Harefield	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,i,a
418583	Tile Kiln Lane, Harefield	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,ii,b
418730	Allonby Drive, Ruislip	LM5006	55.7	50.1	61.6	78.4	56.1	54.5	50.7	3,A,ii,b
418969	Tile Kiln Lane, Harefield	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,ii,b
419094	Breakspear Road South, Harefield	LM1046	57.1	49.0	60.8	69.0	57.5	55.4	48.6	1,A,ii,b
419116	Breakspear Road South, Ickenham	LM2034	49.8	48.4	52.5	70.5	50.1	48.2	48.3	1,A,ii,b
419154	Hoylake Crescent, Ickenham	LM2032	51.5	43.9	43.5	59.1	51.9	49.0	42.6	1,A,ii,b
419186	Hoylake Crescent, Ickenham	LM0037	52.0	45.2	51.7	72.4	51.9	50.3	45.2	1,A,ii,b
419214	Hoylake Crescent, Ickenham	LM7029	54.3	48.1	52.5	77.9	54.8	52.7	48.3	1,A,i,a
419263	Hoylake Crescent, Ickenham	LM0016	49.1	46.8	56.8	80.4	49.7	48.2	47.0	3,A,ii,b
419323	Breakspear Road South, Harefield	LM1046	57.1	49.0	60.8	69.0	57.5	55.4	48.6	1,A,i,a
420281	New Years Green Lane, Harefield	LM0078	54.4	43.6	48.0	72.4	54.7	46.5	43.3	1,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
420688	Lysander Road, Ruislip	LM5105	57.2	51.3	69.0	80.7	57.5	56.7	51.1	3,A,ii,c
420766	Ickenham Close, Ruislip	LM5007	48.6	42.7	55.5	67.3	48.9	48.1	42.5	3,A,ii,b
420916	Ickenham Close, Ruislip	LM5007	48.6	42.7	55.5	67.3	48.9	48.1	42.5	3,A,iii,b
421034	Cranston Close, Ickenham	LM5005	57.5	50.3	53.5	80.9	57.7	54.9	48.8	1,A,iii,b
421089	Aylsham Drive, Ickenham	LM7007	55.2	47.1	62.2	66.9	55.8	52.9	47.1	4,A,ii,b
421774	Lysander Road, Ruislip	LM5105	57.2	51.3	69.0	80.7	57.5	56.7	51.1	3,A,i,c
422160	Ickenham Close, Ruislip	LM5007	48.6	42.7	55.5	67.3	48.9	48.1	42.5	3,A,iii,b
422482	Oak Avenue, Ickenham	LM0040	48.3	39.8	46.3	59.1	48.7	48.5	40.3	1,A,iii,b
422588	The Greenway, Ickenham	LM0014	49.6	44.8	52.8	65.6	49.9	49.7	44.6	3,A,iii,b
422618	The Greenway, Ickenham	LM0040	48.3	39.8	46.3	59.1	48.7	48.5	40.3	1,A,ii,b
422671	The Greenway, Ickenham	LM0015	48.2	45.0	53.0	65.8	48.6	48.4	45.3	3,A,i,a
422883	Haslam Close, Ickenham	LM7007	55.2	47.1	62.2	66.9	55.8	52.9	47.1	4,A,ii,b
422977	The Greenway, Ickenham	LM0014	49.6	44.8	52.8	65.6	49.9	49.7	44.6	3,A,ii,b
422998	The Greenway, Ickenham	LM0077	58.6	52.9	56.5	84.7	58.5	56.8	52.4	1,A,i,a
423037	The Greenway, Ickenham	LM0077	58.6	52.9	56.5	84.7	58.5	56.8	52.4	1,A,ii,b
423100	Ickenham Road, Ruislip	LM5104	72.5	66.6	78.8	90.5	72.8	72.0	66.4	3,A,i,c

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/ weekend L _{pAeq}	Night-time L _{pAeq}	
423112	Ickenham Road, Ruislip	LM0048	52.5	49.9	66.8	78.6	52.5	49.9	49.9	1,D,ii,b
423340	The Greenway, Ickenham	LM5005	57.5	50.3	53.5	80.9	57.7	54.9	48.8	1,A,ii,b
423354	The Greenway, Ickenham	LM5005	57.5	50.3	53.5	80.9	57.7	54.9	48.8	1,A,i,a
423385	The Greenway, Ickenham	LM0040	48.3	39.8	46.3	59.1	48.7	48.5	40.3	1,A,ii,b
423730	Parkfield Road, Ickenham	LM0040	48.3	39.8	46.3	59.1	48.7	48.5	40.3	1,A,iii,b
426310	Ravenscourt Close, Ruislip	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,iii,b
426811	Woodville Gardens, Ruislip	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,iii,b
427629	Larkspur Close, Ruislip	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,iii,b
428888	Harwell Close, Ruislip	LM0048	55.2	49.9	66.8	78.6	55.5	54.7	49.9	1,B,ii,b
428937	Ickenham Road, Ruislip	LM0048	52.5	49.9	66.8	78.6	52.5	49.9	49.9	1,D,ii,b
429574	Glenhurst Avenue, Ruislip	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,iii,b
429655	Glenhurst Avenue, Ruislip	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,iii,b
429776	Field Way, Ruislip	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,iii,b
429830	Hill Rise, Ruislip	LM1100	51.5	45.9	53.8	70.7	51.9	50.3	46.5	1,A,iii,b
433144	Ickenham Road, Ruislip	LM5104	72.5	66.6	78.8	90.5	72.8	72.0	66.4	3,A,ii,c
433365	Heacham Avenue, Ickenham	LM7007	55.2	47.1	62.2	66.9	55.8	52.9	47.1	4,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
438266	Rabournmead Drive, Northolt	LM1019	56.7	54.3	58.8	80.0	56.6	55.9	53.9	3,A,ii,b
459477	Bradfield Road, Ruislip	London_Residential	52.5	49.9	53.1	74.6	52.5	51.2	49.9	7,A,iii,b
463330	Rabournmead Drive, Northolt	LM1204	49.0	43.2	51.5	67.5	49.1	48.6	43.3	1,A,ii,b
700376	New Years Green Lane, Harefield	LM1101	49.8	44.9	49.3	70.3	50.3	47.2	45.1	1,A,ii,b
700377	The Greenway, Ickenham	LM0077	58.6	52.9	56.5	84.7	58.5	56.8	52.4	1,A,ii,b
700378	Ickenham Road, Ruislip	LM5005	57.5	50.3	53.5	80.9	57.7	54.9	48.8	1,A,ii,b
700379	Ickenham Road, Ruislip	LM5005	57.5	50.3	53.5	80.9	57.7	54.9	48.8	1,A,ii,b
700380	Harvil Road, Ickenham	CS1100	48.6	40.9	62.6	73.8	48.8	46.7	40.9	1,BC,ii,b
700462	New Years Green Lane, Harefield	LM0078	54.4	43.6	48.0	72.4	54.7	46.5	43.3	1,A,i,a
700478	Portal Close, Ruislip	LM5106	45.8	37.7	49.8	54.6	46.4	43.5	37.7	4,A,iii,c
700479	Trenchard Avenue, Ruislip	LM5106	45.8	37.7	49.8	54.6	46.4	43.5	37.7	4,A,iii,c
700480	West End Road, Ruislip	LM5106	45.8	37.7	49.8	54.6	46.4	43.5	37.7	4,A,iii,c
700481	Victoria Road, South Ruislip	LM5106	45.8	37.7	49.8	54.6	46.4	43.5	37.7	4,A,iii,c
700482	Tiptree Road, Ruislip	LM5106	45.8	37.7	49.8	54.6	46.4	43.5	37.7	4,A,i,c
709518	Breakspear Road South, Harefield	LM2034	49.8	48.4	52.5	70.5	50.1	48.2	48.3	1,A,ii,b
709519	Breakspear Road South, Harefield	LM2034	49.8	48.4	52.5	70.5	50.1	48.2	48.3	1,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/ weekend L _{pAeq}	Night-time L _{pAeq}	
709520	Breakspear Road South, Harefield	LM2034	49.8	48.4	52.5	70.5	50.1	48.2	48.3	1,A,ii,b

Table 2: Data source coding key

Code	Data source type
1	Long-term measurement location
2	Short-term (linked to simultaneous long-term)
3	Short-term (using profile from non-simultaneous long-term)
4	Short-term using standard (National Noise Incidence Study ³ or other) 24hr profile
5	Specific validated prediction
6	Predictions from other sources (Department of Environment, Food and Rural Affairs (Defra) noise maps ⁴ , etc.)
7	Generic levels

Code	Corrections applied
A	Data from above source applied directly
B	Correction applied for screening
C	Correction applied for distance from source
D	Minimum level cut-off applied

Code	Distance from measurement
i	Data applied from a measurement at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.

Code	Uncertainty
a	Data are considered highly representative of the prevailing sound climate.
b	Data are considered representative of the prevailing sound climate, but variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate, (e.g. taken from Defra noise maps, etc.).

³ Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

⁴ Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.

3.3 Future baseline methodology

Construction

- 3.3.1 The assessment of noise from construction activities assumes a baseline year of 2017. As a conservative assumption, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017.
- 3.3.2 Due to the duration of the construction work and as the precise timing of the highest sound levels would be different in each location, using baseline sound levels for 2017 as the start of the construction period, provides a reasonable worst case assessment.
- 3.3.3 The assessment of construction traffic is based on future baseline traffic flows for 2021, as a year representative of the middle of the construction period.

Operation

- 3.3.4 There is potential for future baseline sound levels for operation (2026) to change when compared to the existing baseline sound levels (2012) as a result of changes in baseline sound sources.
- 3.3.5 In the vast majority of cases where change might occur it is expected that baseline sound levels will increase at assessment locations due to increases in vehicle movements on roads. It is therefore considered that the use of the 2012 baseline levels in the operational assessment will result in a worst case assessment of the impact of changes in the future baseline sound levels in the majority of locations.
- 3.3.6 Therefore for the purposes of this assessment future baseline levels have been assumed to be identical to those identified in Table 1 for 2012.
- 3.3.7 In addition, based on available road traffic information a screening exercise has been undertaken to identify any areas in which a reduction in baseline sound level might be likely. Where reductions in baseline sound level have been identified a further screening assessment has been completed to identify if these changes would be likely to materially affect the operational sound assessment.
- 3.3.8 The screening assessment has not identified any locations in this area where a decrease in future baseline (2026), compared to existing baseline (2012), is likely to materially affect the operational sound assessment.

4 References

Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.